

**4.6 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES**

Implementation of any of the build alternatives includes a commitment of natural, human, and fiscal resources. New roadways would convert land from agriculture use, wetlands, woodlands, and other uses to highway purposes. Land acquired for construction is considered an irreversible commitment during the period that the land is used for highway purposes. However, if a greater need arises for the land or the highway is no longer needed, the land could be converted to another use. At this time there is no reason to believe such a conversion would be necessary or desirable for this portion of US 8.

Considerable amounts of fossil fuel, labor, and highway construction materials, such as concrete, aggregate, and asphaltic materials, would be expended during the construction of the highway facility. In addition, considerable labor and natural resources are generally not retrievable; however, they are not currently in short supply and their use would not have an adverse effect on their continued availability. Any construction would also require a substantial, one-time expenditure of public funds, the investment of which is retrievable in terms of travel efficiency and improved safety of the facility.

The eventual commitment of resources is justified by the benefits of the improved transportation system to highway users and businesses in the immediate area and the region and state. These benefits include improved accessibility and safety as well as savings in travel time and costs.

**4.7 ENERGY**

Energy consumption manifests itself in the raw materials and fuels used to construct, operate, and maintain a highway facility. Construction energy is comprised of the raw materials and equipment necessary to build and maintain the highway. Operational energy is the direct consumption of fuel by vehicles using the highway. Fuel consumption, in turn, is affected by the types of vehicles using the roadway and the roadway's travel speed, geometry, condition, and congestion.

The various Four-lane Alternatives would result in energy consumption during construction of the facility. However, fuel consumption per vehicle would be reduced because of the free flow of traffic and fewer delays while traveling. The Four-lane Alternatives would require greater construction energy than required for the No-build Alternative. However, the operational energy required is anticipated to be less because of reduced congestion and increased safety. Over the design life of the facility, the savings in operational energy would be anticipated to offset the energy required to construct any of the four-lane alternatives.